



**Tausec s.r.o.**

Tel: +421 903 81 95 98

Fax: +421 55 6432 958

[www.tausec.com](http://www.tausec.com)

**E-rotor electronic siren**

**Configuration SW manual**

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Contents:

<b>1. USING THE CONFIGURATION TOOL .....</b>	<b>3</b>
1.1 MENU ITEMS.....	3
<b>2. REMOTE CONTROL.....</b>	<b>4</b>
2.1 SERIAL PORT.....	4
2.2 INPUTS.....	4
<b>3. EROTOR SETUP.....</b>	<b>5</b>
3.1 GENERIC SETTINGS .....	5
3.2 MMC FILES .....	5
3.3 ACTIONS (SX COMMANDS, SX ALARMS, INPUTS).....	5
3.4 OUTPUTS .....	6

## 1. USING THE CONFIGURATION TOOL



### 1.1 Menu items

**Read**

Read configuration from siren connected to serial port

**Write**

Write configuration to siren connected to serial port

**Load**

Read siren configuration from YAML file on PC

**Save**

Write siren configuration to YAML file on PC

**Direct control**

It is possible to send all configured sx commands and sx commands directly to siren via serial port. Sx commands and sx alarms are described in 2.1 Serial port section.



## 2. REMOTE CONTROL

Siren can be controlled remotely by following means:

- Serial port (RS232, 9600 baud, 8N1)
- CAN bus
- Binary inputs

### 2.1 Serial port

Siren can be controlled by serial port with following settings: 9600 baud, 8bit, no parity, 1 stop bit.

Siren is activated by character sequence starting with '?' . If it is parsed successfully, siren responds by same string, only with '+' at the beginning.

There are two kind of sequences: Sx commands and sx alarms. They are described below with extended Backus-Naur form.

**Sx commands** starts with '?' character followed by twice repeated number of the command (0-6) and end with '%' character. They have the following syntax:

```
cmd := "00" | "11" | "33" | "44" | "55" | "66"  
sxc := "?", cmd, "%"
```

Sx command ?44% is hardcoded for stop action, others are user configurable. Note that 22 is reserved for sx alarms.

**Sx alarms** starts with "?22;" string followed by twice repeated number of alarms, semicolon and specific alarm number, each repeated twice. They have following syntax:

```
count := "11" | "22" | "33" | "44"  
alarm := "00" | ... | "99" | "AA" | .. | "ZZ"  
sxa := "?22;", count, ";", alarm, [alarm, [alarm, [alarm]]], "%"
```

Count has to be the number of alarms in the Sx alarm directive. For example ?22;33;88AA99% executes following 3 alarms: 88, AA and 99. All sx alarms are user configurable.

### 2.2 Inputs

eRotor can also be controlled by two binary inputs (A1 and A2). You can set up different actions for both opening and closing the input contact. Close the contact (START) by short-circuiting the contact braces. That is by connecting the input brace with ground (0V). Opening the contact (STOP) is done by disconnecting the contact braces.

Inputs are protected from oscillation by software, so opening/closing of the contact has to be longer than 100 milliseconds.



## **3. EROTOR SETUP**

### **3.1 Generic settings**

#### **Siren type**

Siren type is specified by the number of amplifiers and drivers. This setting is important for siren test, because it used to diagnose amplifier and driver failures.

*If you change type of siren, it is necessary to perform new calibration.*

#### **FM Radio**

Sets the frequency of built-in radio receiver.

#### **Output volume**

Output level of the basic eRotor unit. When used with PA08 amplifiers the output level should not exceed -6dB. With higher setting you may damage drivers. Although PA08 amplifiers have temperature protection, they may get damaged too.

*When you use eRotor as a general-purpose source of audio signal, you may set the output volume in full scale as needed.*

### **3.2 MMC files**

All files need to be stored in root directory of the MMC Card. They are checked on siren start, so it is advisable to keep the number of files small for fast startup. If any file is not found, siren is restarted.

#### **Filename**

Filename is uppercase and in DOS 8.3 notation, unused characters from name and extensions are padded with spaces.

#### **LCD Title**

Text that is shown on siren LCD when playing this file.

### **3.3 Actions (Sx commands, Sx alarms, Inputs)**

Sx commands and sx alarms are described in 2.1 Serial port section.

#### **Siren action**

Action to do when specified command/alarm/input is activated.

##### **None**

No action is performed

##### **Reset**

Restart the siren

##### **Test**

Performs test of siren, same as test from siren panel. Checks amplifiers, drivers, power, battery state etc. Result is shown on LCD panel.

##### **Play file**

Play file from MMC files table



**AUX input**

Play signal from auxiliary input

**Stop**

Stop performing any actions with same or lower priority

**Parameter**

Parameter depends on selected action:

**Play file**

File to play, from MMC files table

**AUX input**

Which input to play

For other actions parameter is ignored.

**Priority**

Priority of given action in queue. It is recommended to leave default values which are:

<u>Action</u>	<u>Priority</u>
None	0
Reset	200
Test	20
Play file	20
AUX input	20
Stop	100

By assigning higher priority to binary inputs or sx commands/alarms you can choose which can be interrupted by other. Stop command always needs higher priority than the corresponding command you want to stop.

### **3.4 Outputs**

Siren is equipped with two output relays, each of them can be configured to react to different condition.

**Trigger**

On which action generate impulse on the relay. This can be one of sx alarms or every siren activation.

**Duration**

Length in seconds of the impulse generated on the relay